

\*edit authorized by Examiner

CRF Errors Corrected by the STIC Systems Branch

CRF Processing Date: 4/9/2003

Edited by: [Signature]

Verified by: [Signature] (STIC staff)

Serial Number: 09/270,4370

ENTERED

- ☐ Changed a file from non-ASCII to ASCII
- ☐ Changed the margins in cases where the sequence text was "wrapped" down to the next line.
- ☐ Edited a format error in the Current Application Data section, specifically: \_\_\_\_\_
- ☐ Edited the Current Application Data section with the actual current number. The number inputted by the applicant was ☐ the prior application data; or ☐ other \_\_\_\_\_
- ☐ Added the mandatory heading and subheadings for "Current Application Data".
- ☐ Edited the "Number of Sequences" field. The applicant spelled out a number instead of using an integer.
- ☐ Changed the spelling of a mandatory field (the headings or subheadings), specifically: \_\_\_\_\_
- ☐ Corrected the SEQ ID NO when obviously incorrect. The sequence numbers that were edited were: \_\_\_\_\_
- ☐ Inserted or corrected a nucleic number at the end of a nucleic line. SEQ ID NO's edited: \_\_\_\_\_
- ☐ Corrected subheading placement. All responses must be on the same line as each subheading. If the applicant placed a response below the subheading, this was moved to its appropriate place.
- ☐ Inserted colons after headings/subheadings. Headings edited included: \_\_\_\_\_
- ☐ Deleted extra, invalid, headings used by an applicant, specifically: \_\_\_\_\_
- ☐ Deleted: ☐ non-ASCII "garbage" at the beginning/end of files; ☐ secretary initials/filename at end of file; ☐ page numbers throughout text; ☐ other invalid text, such as \_\_\_\_\_
- ☐ Inserted mandatory headings, specifically: \_\_\_\_\_
- ☐ Corrected an obvious error in the response, specifically: \_\_\_\_\_
- ☐ Edited identifiers where upper case is used but lower case is required, or vice versa.
- ☐ Corrected an error in the Number of Sequences field, specifically: \_\_\_\_\_
- ☐ A "Hard Page Break" code was inserted by the applicant. All occurrences had to be deleted.
- ☐ Deleted *ending* stop codon in amino acid sequences and adjusted the "(A)Length:" field accordingly (error due to a PatentIn bug). Sequences corrected: \_\_\_\_\_
- ☒ Other: inserted an initial 'c' at location 2161 of Sequence 1

\*Examiner: The above corrections must be communicated to the applicant in the first Office Action. DO NOT send a copy of this form. 3/1/95



1600

## RAW SEQUENCE LISTING

DATE: 04/09/2003

PATENT APPLICATION: US/09/270,437D

TIME: 13:16:41

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\04092003\I270437D.raw

1 <110> APPLICANT: Chen, Yao-Tseng  
 2 Gure, Ali  
 3 Tsang, Solam  
 4 Stockert, Elisabeth  
 5 Jager, Elke  
 6 Knuth, Alexander  
 7 Old, Lloyd J.  
 9 <120> TITLE OF INVENTION: Isolated Nucleic Acid Molecules Encoding Cancer Associated  
 Antigen, The  
 10 Antigens Per Se, And Uses Thereof  
 12 <130> FILE REFERENCE: LUD 5538.1  
 14 <140> CURRENT APPLICATION NUMBER: 09/270,437D  
 C--> 16 <141> CURRENT FILING DATE: 1999-03-16  
 18 <150> PRIOR APPLICATION NUMBER: 09/061,709  
 20 <151> PRIOR FILING DATE: 1998-04-17  
 22 <160> NUMBER OF SEQ ID NOS: 23  
 25 <210> SEQ ID NO: 1  
 26 <211> LENGTH: 4265  
 27 <212> TYPE: DNA  
 28 <213> ORGANISM: Homo sapiens  
 W--> 29 <220> FEATURE:  
 W--> 30 <400> SEQUENCE: 1

32 gtctgaagga cctgaggcat tttgtgacga ggatcgtctc aggtcagcgg agggaggaga 60  
 33 cttatagacc tatccagtct tcaaggtgct ccagaaagca ggagttgaag acctgggtgt 120  
 34 gagggacaca tacatcctaa aagcaccaca gcagaggagg cccaggcagt gccaggagtc 180  
 35 aaggttccca gaagacaaac cccctaggaa gacaggcgac ctgtgaggcc ctagagcacc 240  
 36 accttaagag aagaagagct gtaagccggc ctttgtcaga gccatcatgg gggacaagga 300  
 37 tatgcctact gctgggatgc cgagtcttct ccagagttcc tctgagagtc ctgagagttg 360  
 38 tcctgagggg gaggactccc agtctcctct ccagattccc cagagttctc ctgagagcga 420  
 39 cgacaccctg tatcctctcc agagtccctca gagtgcgttct gagggggagg actcctcgga 480  
 40 tcctctccag agacctcctg aggggaagga ctcccagtct cctctccaga ttccccagag 540  
 41 ttctcctgag ggcgacgaca cccagtctcc tctccagaat tctcagagtt ctccctgagg 600  
 42 gaaggactcc ctgtctcctc tagagatttc tcagagccct cctgagggtg aggatgtcca 660  
 43 gtctcctctg cagaatcctg cgagttcctt cttctcctct gctttattga gtattttcca 720  
 44 gagttccctt gagagtattc aaagtccctt tgagggtttt cccagtcctg ttctccagat 780  
 45 tcctgtgagc gccgcctcct cctccacttt agtgagtatt ttccagagtt cccctgagag 840  
 46 tactcaaagt ccttttgagg gttttcccca gtctccactc cagattcctg tgagccgctc 900  
 47 cttctcctcc acttttattga gtattttcca gaggttccct gagagaagtc agagaacttc 960  
 48 tgagggtttt gcacagtcct ctctccagat tcctgtgagc tcctcctcgt cctccacttt 1020  
 49 actgagttct ttccagagtt cccctgagag aactcagagt acttttgagg gttttcccca 1080  
 50 gtctccactc cagattcctg tgagccgctc cttctcctcc actttattga gtattttcca 1140  
 51 gagttccctt gagagaactc agagtacttt tgagggtttt gccagtcctc ctctccagat 1200  
 52 tcctgtgagc cctccttct cctccacttt agtgagtatt ttccagagtt cccctgagag 1260  
 53 aactcagagt acttttgagg gttttcccca gtctcctctc cagattcctg tgagctcctc 1320

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54 cttctcctcc actttattga gtcttttcca gagttcccct gagagaactc agagtacttt 1380
57 tgagggtttt cccaggtctc ctctccagat tcctggaagc cctccttct cctccacttt 1440
58 actgagtctt ttccagagtt cccctgagag aactcacagt acttttgagg gttttcccca 1500
59 gtctcctctc cagattccta tgacctcctc cttctcctct actttattga gtattttaca 1560
60 gagttctcct gagagtgtct aaagtgtctt tgagggtttt cccaggtctc ctctccagat 1620
61 tcctgtgagc tcctctttct cctacacttt attgagtctt ttccagagtt cccctgagag 1680
62 aactcacagt acttttgagg gttttcccca gtctcctctc cagattcctg tgagctcctc 1740
63 ctccctcctc tccactttat tgagtctttt ccagagttcc cctgagtgtc ctcaaagtac 1800
64 ttttgagggt tttccccagt ctctctcca gattcctcag agtcctcctg aaggggagaa 1860
65 taccattctt cctctccaga ttgttccaag tcttctcctg tgggaggact ccctgtctcc 1920
66 tcaactactt cctcagagcc ctctcagggt ggaggactcc ctatctcctc actactttcc 1980
67 tcagagccct cctcaggggt aggactccct gtctcctcac tactttcctc agagccctca 2040
68 gggggaggac tccctgtctc ctcaactact tcctcagagc cctcctcagg gggaggactc 2100
69 catgtctcct ctcaactttc ctcaaggtcc tcttcagggt gaggaattcc agtcttctct 2160
70 ccagagccct gtgagcatct gtcctcctc cactccatcc agtcttcccc agagtttccc 2220
71 tgagagtctt cagagtctct ctgagggggt tgtccagtct cctctccata gtcctcagag 2280
72 cctcctgag gggatgcact cccaatctcc tctccagagt cctgagagtg ctctgagggt 2340
73 ggaggattcc ctgtctctc tccaaattcc tcagagtcct cttgagggag aggactccct 2400
74 gtcttctctc cattttctc agagtcctcc tgagtgggag gactccctct ctctctcca 2460
75 ctttctcag tttctcctc agggggagga cttccagtct tctctccaga gtcctgtgag 2520
76 tatctgtctc tcctccactt ctttgagtct tcccagagt ttccctgaga gtcctcagag 2580
77 tcctcctgag gggcctgtct agtctcctct ccagagacct gtcagctcct tcttctccta 2640
78 cacttttagc agtcttctcc aaagtccca tgagagtcct cagagtcctc ctgagggggt 2700
79 tgcccagtct cctctccaga gtctgtgag ctcttcccc tcctccactt catcgagtct 2760
80 ttcccagagt tctcctgtga gtccttccc ctctccact tcacgagtc tttccaagag 2820
81 ttcccctgag agtctctcc agagtctgt gatctcctt tcctcctcca cttcattgag 2880
82 cccattcagt gaagagtcca gcagccagt agatgaatat acaagttcct cagacacctt 2940
83 gctagagagt gattccttga cagacagcga gtccttgata gagagcgagc ccttggtcac 3000
84 ttatacactg gatgaaaagg tggacgaggt ggcgcggttt cttctcctca aatatcaagt 3060
85 gaagcagcct atcacaaagg cagagatgct gacgaatgtc atcagcaggt acacgggcta 3120
86 ctttctgtg atcttcagga aagcccggtg gttcatagag atactttttg gcattttcct 3180
87 gagagaagtg gacctgatg actcctatgt ctttgtaaac acattagacc tcacctctga 3240
88 ggggtgtctg agtgatgagc agggcatgtc ccagaaccgc ctctgattc ttattctgag 3300
89 tatcatcttc ataaagggca cctatgcctc tgaggaggtc atctgggatg tgctgagtgg 3360
90 aataggggtg cgtgtggga gggagcactt tgcctttggg gagcccagg agctcctcac 3420
91 taaagtgttg gtgcaggaac attacctaga gtaccgggag gtgcccact cttctcctcc 3480
92 tcgttacgaa ttctgtggg gtccaagagc tcattcagaa gtcattaaga ggaaagtagt 3540
93 agagtttttg gccatgctaa agaataccgt ccctattacc tttccatcct cttacaagga 3600
94 tgctttgaaa gatgtggaag agagagccca ggccataatt gacaccacag atgattcgac 3660
95 tgccacagaa agtgcaagct ccagtgtcat gtccccagc ttctcttctg agtgaagtct 3720
96 agggcagatt cttccctctg agtttgaagg gggcagtcga gtttctacgt ggtggagggt 3780
97 ctggttgagg ctggagagaa cacagtgtca tttgcatttc tgttccatat ggtagtatt 3840
98 ggggtttacc tgttttactt ttgggtattt ttcaaatgct tttcctatta ataacaggtt 3900
99 taaatagctt cagaatccta gtttatgcac atgagtcgca catgtattgc tgtttttctg 3960
100 gtttaagagt aacagtttga tattttgtaa aaacaaaaac acaccacatt 4020
101 gggaaaacct tctgcctcat tttgtgatgt gtcacaggtt aatgtggtgt tactgtagga 4080
102 attttcttga aactgtgaag gaactctgca gttaaatagt ggaataaagt aaaggattgt 4140
103 taatgtttgc atttctcag gtcctttagt ctgtgttct tgaaaactaa agatacatat 4200
104 ctggtttgct tggcttacgt aagaaagtcg aagaaagtaa actgtaataa ataaaagtg 4260

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## RAW SEQUENCE LISTING

DATE: 04/09/2003

PATENT APPLICATION: US/09/270,437D

TIME: 13:16:41

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\04092003\I270437D.raw

105 cagtg 4265

107 <210> SEQ ID NO: 2

108 <211> LENGTH: 1142

109 <212> TYPE: PRT

110 <213> ORGANISM: Homo sapiens

113 <220> FEATURE:

W--> 114 <400> SEQUENCE: 2

116 Met Gly Asp Lys Asp Met Pro Thr Ala Gly Met Pro Ser Leu Leu Gln  
117 5 10 15

118 Ser Ser Ser Glu Ser Pro Gln Ser Cys Pro Glu Gly Glu Asp Ser Gln  
119 20 25 30

120 Ser Pro Leu Gln Ile Pro Gln Ser Pro Glu Ser Asp Asp Thr Leu  
121 35 40 45

122 Tyr Pro Leu Gln Ser Pro Gln Ser Arg Ser Glu Gly Glu Asp Ser Ser  
123 50 55 60

124 Asp Pro Leu Gln Arg Pro Pro Glu Gly Lys Asp Ser Gln Ser Pro Leu  
125 65 70 75 80

126 Gln Ile Pro Gln Ser Ser Pro Glu Gly Asp Asp Thr Gln Ser Pro Leu  
127 85 90 95

128 Gln Asn Ser Gln Ser Ser Pro Glu Gly Lys Asp Ser Leu Ser Pro Leu  
129 100 105 110

130 Glu Ile Ser Gln Ser Pro Pro Glu Gly Glu Asp Val Gln Ser Pro Leu  
131 115 120 125

132 Gln Asn Pro Ala Ser Ser Phe Phe Ser Ser Ala Leu Leu Ser Ile Phe  
133 130 135 140

134 Gln Ser Ser Pro Glu Ser Ile Gln Ser Pro Phe Glu Gly Phe Pro Gln  
135 145 150 155 160

136 Ser Val Leu Gln Ile Pro Val Ser Ala Ala Ser Ser Ser Thr Leu Val  
137 165 170 175

138 Ser Ile Phe Gln Ser Ser Pro Glu Ser Thr Gln Ser Pro Phe Glu Gly  
139 180 185 190

140 Phe Pro Gln Ser Pro Leu Gln Ile Pro Val Ser Arg Ser Phe Ser Ser  
141 195 200 205

142 Thr Leu Leu Ser Ile Phe Gln Ser Ser Pro Glu Arg Ser Gln Arg Thr  
143 210 215 220

144 Ser Glu Gly Phe Ala Gln Ser Pro Leu Gln Ile Pro Val Ser Ser Ser  
145 225 230 235 240

146 Ser Ser Ser Thr Leu Leu Ser Leu Phe Gln Ser Ser Pro Glu Arg Thr  
147 245 250 255

148 Gln Ser Thr Phe Glu Gly Phe Pro Gln Ser Pro Leu Gln Ile Pro Val  
149 260 265 270

150 Ser Arg Ser Phe Ser Ser Thr Leu Ser Ile Phe Gln Ser Ser Pro  
151 275 280 285

152 Glu Arg Thr Gln Ser Thr Phe Glu Gly Phe Ala Gln Ser Pro Leu Gln  
153 290 295 300

154 Ile Pro Val Ser Pro Ser Phe Ser Ser Thr Leu Val Ser Ile Phe Gln  
155 305 310 315 320

156 Ser Ser Pro Glu Arg Thr Gln Ser Thr Phe Glu Gly Phe Pro Gln Ser  
157 325 330 335

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158 Pro Leu Gln Ile Pro Val Ser Ser Ser Phe Ser Ser Thr Leu Leu Ser
159          340          345          350
160 Leu Phe Gln Ser Ser Pro Glu Arg Thr Gln Ser Thr Phe Glu Gly Phe
161          355          360          365
162 Pro Gln Ser Pro Leu Gln Ile Pro Gly Ser Pro Ser Phe Ser Ser Thr
163          370          375          380
164 Leu Leu Ser Leu Phe Gln Ser Ser Pro Glu Arg Thr His Ser Thr Phe
165 385          390          395          400
166 Glu Gly Phe Pro Gln Ser Pro Leu Gln Ile Pro Met Thr Ser Ser Phe
169          405          410          415
170 Ser Ser Thr Leu Leu Ser Ile Leu Gln Ser Ser Pro Glu Ser Ala Gln
171          420          425          430
172 Ser Ala Phe Glu Gly Phe Pro Gln Ser Pro Leu Gln Ile Pro Val Ser
173          435          440          445
174 Ser Ser Phe Ser Tyr Thr Leu Leu Ser Leu Phe Gln Ser Ser Pro Glu
175          450          455          460
176 Arg Thr His Ser Thr Phe Glu Gly Phe Pro Gln Ser Pro Leu Gln Ile
177 465          470          475          480
178 Pro Val Ser Ser Ser Ser Ser Ser Ser Thr Leu Leu Ser Leu Phe Gln
179          485          490          495
180 Ser Ser Pro Glu Cys Thr Gln Ser Thr Phe Glu Gly Phe Pro Gln Ser
181          500          505          510
182 Pro Leu Gln Ile Pro Gln Ser Pro Pro Glu Gly Glu Asn Thr His Ser
183          515          520          525
184 Pro Leu Gln Ile Val Pro Ser Leu Pro Glu Trp Glu Asp Ser Leu Ser
185          530          535          540
186 Pro His Tyr Phe Pro Gln Ser Pro Pro Gln Gly Glu Asp Ser Leu Ser
187 545          550          555          560
188 Pro His Tyr Phe Pro Gln Ser Pro Pro Gln Gly Glu Asp Ser Leu Ser
189          565          570          575
190 Pro His Tyr Phe Pro Gln Ser Pro Gln Gly Glu Asp Ser Leu Ser Pro
191          580          585          590
192 His Tyr Phe Pro Gln Ser Pro Pro Gln Gly Glu Asp Ser Met Ser Pro
193          595          600          605
194 Leu Tyr Phe Pro Gln Ser Pro Leu Gln Gly Glu Glu Phe Gln Ser Ser
195          610          615          620
196 Leu Gln Ser Pro Val Ser Ile Cys Ser Ser Ser Thr Pro Ser Ser Leu
197 625          630          635          640
198 Pro Gln Ser Phe Pro Glu Ser Ser Gln Ser Pro Pro Glu Gly Pro Val
199          645          650          655
200 Gln Ser Pro Leu His Ser Pro Gln Ser Pro Pro Glu Gly Met His Ser
201          660          665          670
202 Gln Ser Pro Leu Gln Ser Pro Glu Ser Ala Pro Glu Gly Glu Asp Ser
203          675          680          685
204 Leu Ser Pro Leu Gln Ile Pro Gln Ser Pro Leu Glu Gly Glu Asp Ser
205          690          695          700
206 Leu Ser Ser Leu His Phe Pro Gln Ser Pro Pro Glu Trp Glu Asp Ser
207 705          710          715          720
208 Leu Ser Pro Leu His Phe Pro Gln Phe Pro Pro Gln Gly Glu Asp Phe

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DATE: 04/09/2003

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TIME: 13:16:41

Input Set : A:\PTO.AMC.txt

Output Set: N:\CRF4\04092003\I270437D.raw

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209              725              730              735
210 Gln Ser Ser Leu Gln Ser Pro Val Ser Ile Cys Ser Ser Ser Thr Ser
211              740              745              750
212 Leu Ser Leu Pro Gln Ser Phe Pro Glu Ser Pro Gln Ser Pro Pro Glu
213              755              760              765
214 Gly Pro Ala Gln Ser Pro Leu Gln Arg Pro Val Ser Ser Phe Phe Ser
215              770              775              780
216 Tyr Thr Leu Ala Ser Leu Leu Gln Ser Ser His Glu Ser Pro Gln Ser
217 785              790              795              800
218 Pro Pro Glu Gly Pro Ala Gln Ser Pro Leu Gln Ser Pro Val Ser Ser
219              805              810              815
220 Phe Pro Ser Ser Thr Ser Ser Ser Leu Ser Gln Ser Ser Pro Val Ser
221              820              825              830
222 Ser Phe Pro Ser Ser Thr Ser Ser Ser Leu Ser Lys Ser Ser Pro Glu
225              835              840              845
226 Ser Pro Leu Gln Ser Pro Val Ile Ser Phe Ser Ser Ser Thr Ser Leu
227              850              855              860
228 Ser Pro Phe Ser Glu Glu Ser Ser Ser Pro Val Asp Glu Tyr Thr Ser
229 865              870              875              880
230 Ser Ser Asp Thr Leu Leu Glu Ser Asp Ser Leu Thr Asp Ser Glu Ser
231              885              890              895
232 Leu Ile Glu Ser Glu Pro Leu Phe Thr Tyr Thr Leu Asp Glu Lys Val
233              900              905              910
234 Asp Glu Leu Ala Arg Phe Leu Leu Lys Tyr Gln Val Lys Gln Pro
235              915              920              925
236 Ile Thr Lys Ala Glu Met Leu Thr Asn Val Ile Ser Arg Tyr Thr Gly
237              930              935              940
238 Tyr Phe Pro Val Ile Phe Arg Lys Ala Arg Glu Phe Ile Glu Ile Leu
239 945              950              955              960
240 Phe Gly Ile Ser Leu Arg Glu Val Asp Pro Asp Asp Ser Tyr Val Phe
241              965              970              975
242 Val Asn Thr Leu Asp Leu Thr Ser Glu Gly Cys Leu Ser Asp Glu Gln
243              980              985              990
244 Gly Met Ser Gln Asn Arg Leu Leu Ile Leu Ile Leu Ser Ile Ile Phe
245              995              1000              1005
246 Ile Lys Gly Thr Tyr Ala Ser Glu Glu Val Ile Trp Asp Val Leu Ser
247              1010              1015              1020
248 Gly Ile Gly Val Arg Ala Gly Arg Glu His Phe Ala Phe Gly Glu Pro
249 1025              1030              1035              1040
250 Arg Glu Leu Leu Thr Lys Val Trp Val Gln Glu His Tyr Leu Glu Tyr
251              1045              1050              1055
252 Arg Glu Val Pro Asn Ser Ser Pro Pro Arg Tyr Glu Phe Leu Trp Gly
253              1060              1065              1070
254 Pro Arg Ala His Ser Glu Val Ile Lys Arg Lys Val Val Glu Phe Leu
255              1075              1080              1085
256 Ala Met Leu Lys Asn Thr Val Pro Ile Thr Phe Pro Ser Ser Tyr Lys
257              1090              1095              1100
258 Asp Ala Leu Lys Asp Val Glu Glu Arg Ala Gln Ala Ile Ile Asp Thr
259 1105              1110              1115              1120

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RAW SEQUENCE LISTING ERROR SUMMARY  
PATENT APPLICATION: US/09/270,437D

DATE: 04/09/2003  
TIME: 13:16:42

Input Set : A:\PTO.AMC.txt  
Output Set: N:\CRF4\04092003\I270437D.raw

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:4; N Pos. 3347,3502,3506,3520,3538,3549,3646,3940,3968,3974,4036,4056  
Seq#:4; N Pos. 4062,4080,4088,4115  
Seq#:5; N Pos. 1384,1464,1533,1571,1595  
Seq#:6; N Pos. 3372  
Seq#:7; N Pos. 1622,1702,1771,1809,1833  
Seq#:8; N Pos. 3243